



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: SHENZHEN ELECTRON TECHNOLOGY CO.,LTD

Product Name: WIFI Antenna

Product Model: NW2196T

Part Number: LJF02-22062308-R0A

Write By : Huxuwen

Issued Date: 2022-06-23

CUSTOMER

ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVAL
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LEJIN

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REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2022/06/23	



Index

1. Cover	1
2. Index	2
3. Product Specification	3
4. Test Equipment & Conditions	3
5. Test Report	4
6. Reliability Test	5
7. Assemble type	6
8. Product Drawing	8

3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	≥35%
Impedance	50Ohm
Polarization	Linear
Gain(2.4GHz)	≤2.27dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(White),LJWF51BAA
Cable Type	Φ1.13mm,L280mm,Black
Connector Type	IPX1
Dimension	40.0*20.mm
C. Environmental	
Operation Temperature	- 20 °C ~ + 70 °C
Storage Temperature	- 30 °C ~ + 85 °C
Humidity	40%~95%

4.Test Equipment & Conditions

- 1.Network Analyzers Agilent 8753D/5071C
- 2.HSPA and LTE protocol test set R&S CMW500 -PT
- 3.Communications Test Set Agilent 8960
- 4.3D Chamber Test System

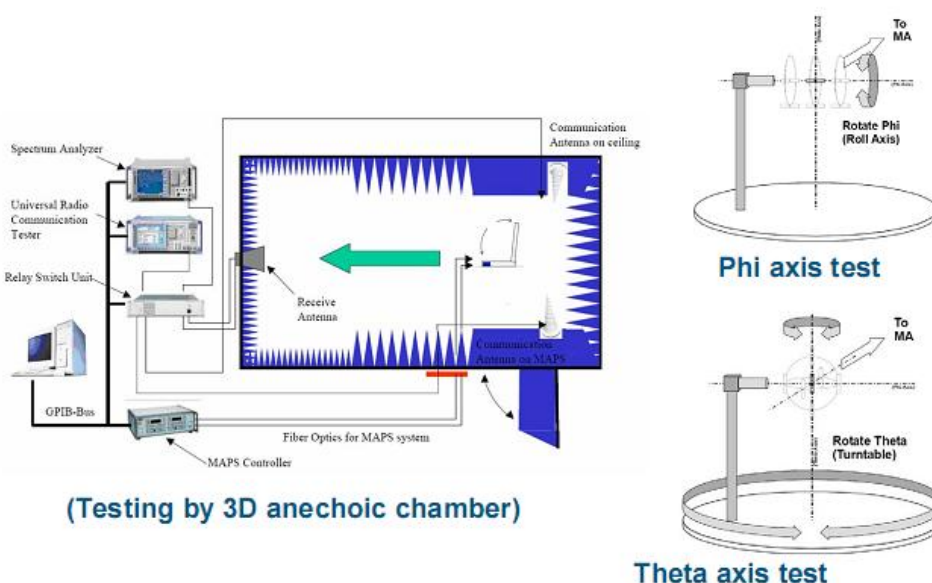


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

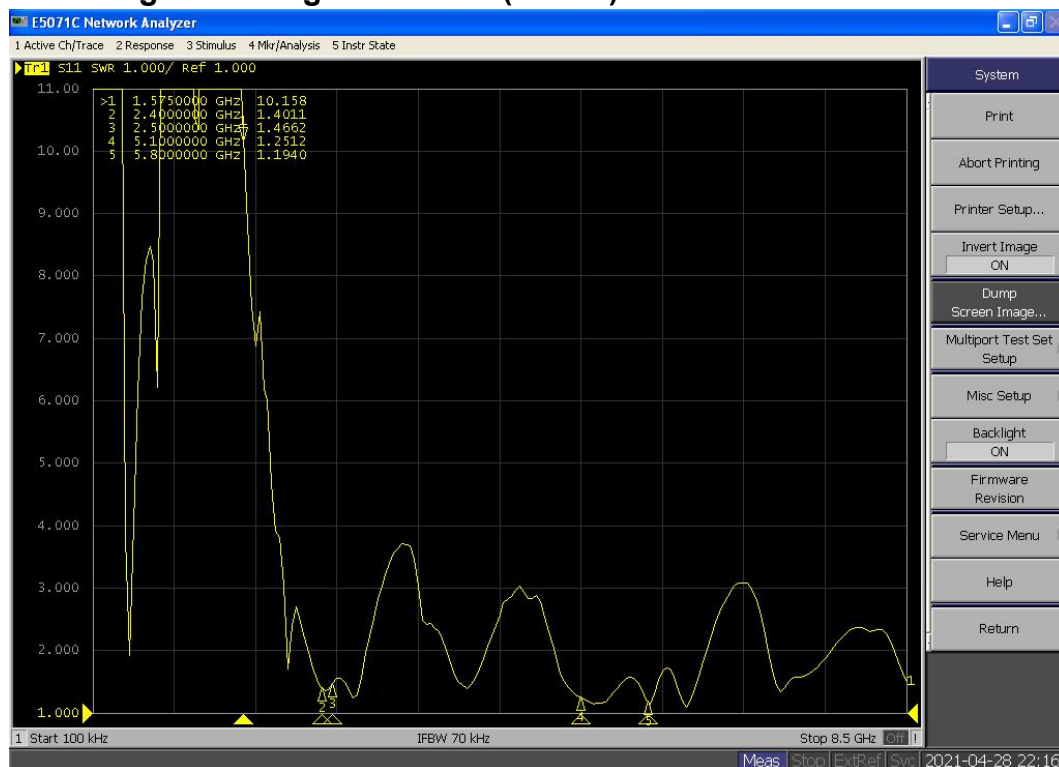
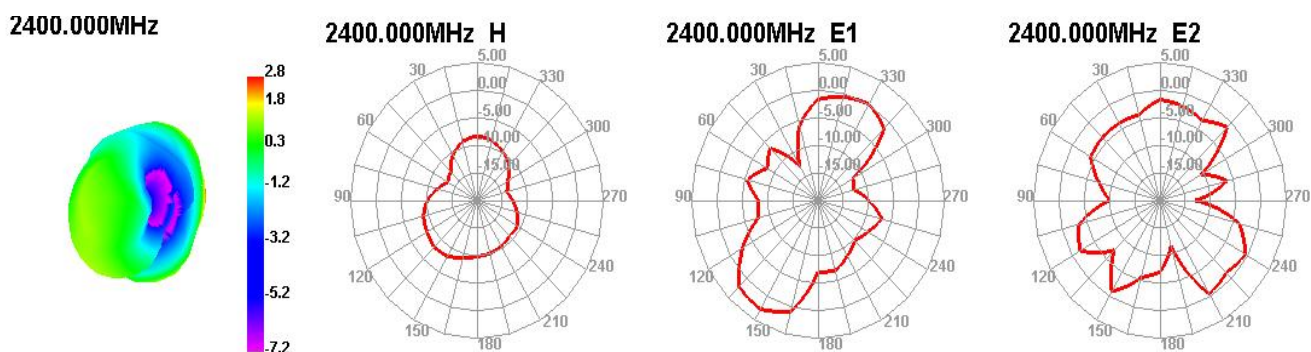


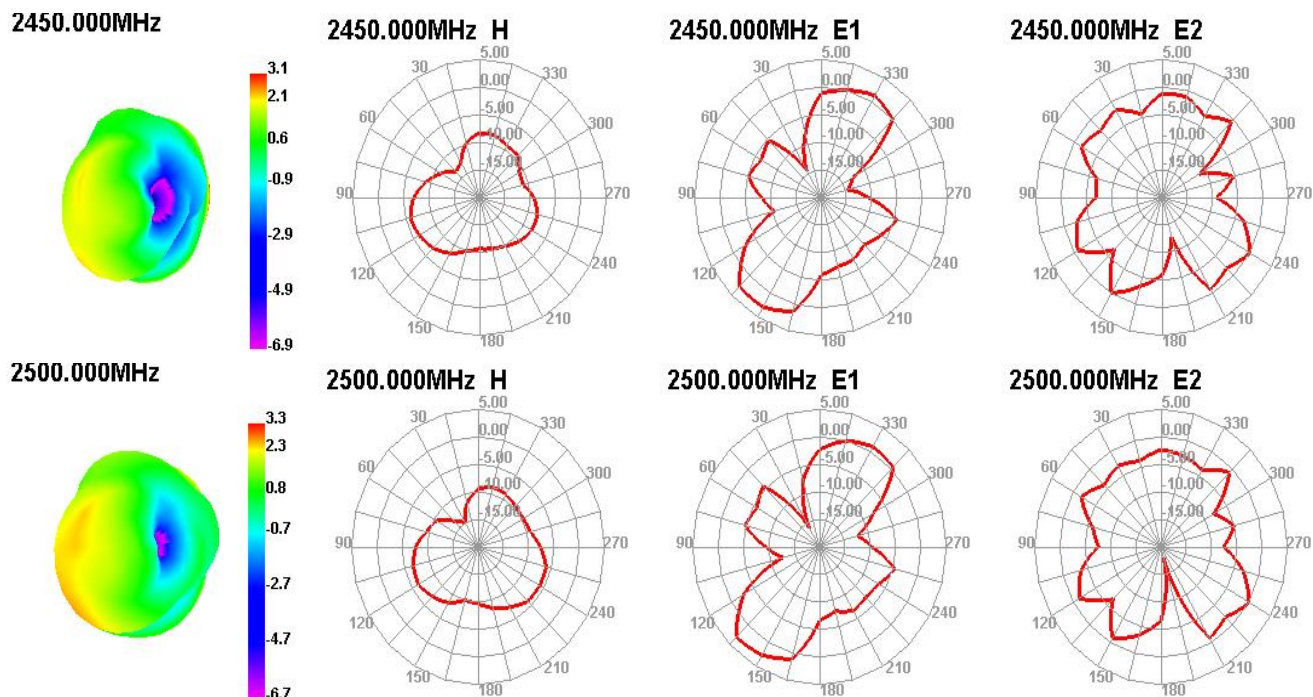
Chart 2 VSWR

5.2 Efficient and gain.

Passive Test For 2.4G	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	42.92	48.42	45.89	49.73	45.98	49.52	47.16	50.01	43.90	43.55	41.54
	Gain(dBi)	1.92	2.00	2.05	2.16	2.13	2.27	2.03	2.15	2.25	2.14	1.88

5.3 Radiation pattern.





6. Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃ , Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃ ,test antenna after 2 hours.	Temp.&Humidity Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.	Temp.&Humidity Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray Test	Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: 35±2℃ Humidity: 85% NaCl salt spray :5±1%.PH value :6.5~7.2 Testtime:24hours	Salt-Spray Tester	No color change No appear rusting	PASS

7. Assemble type

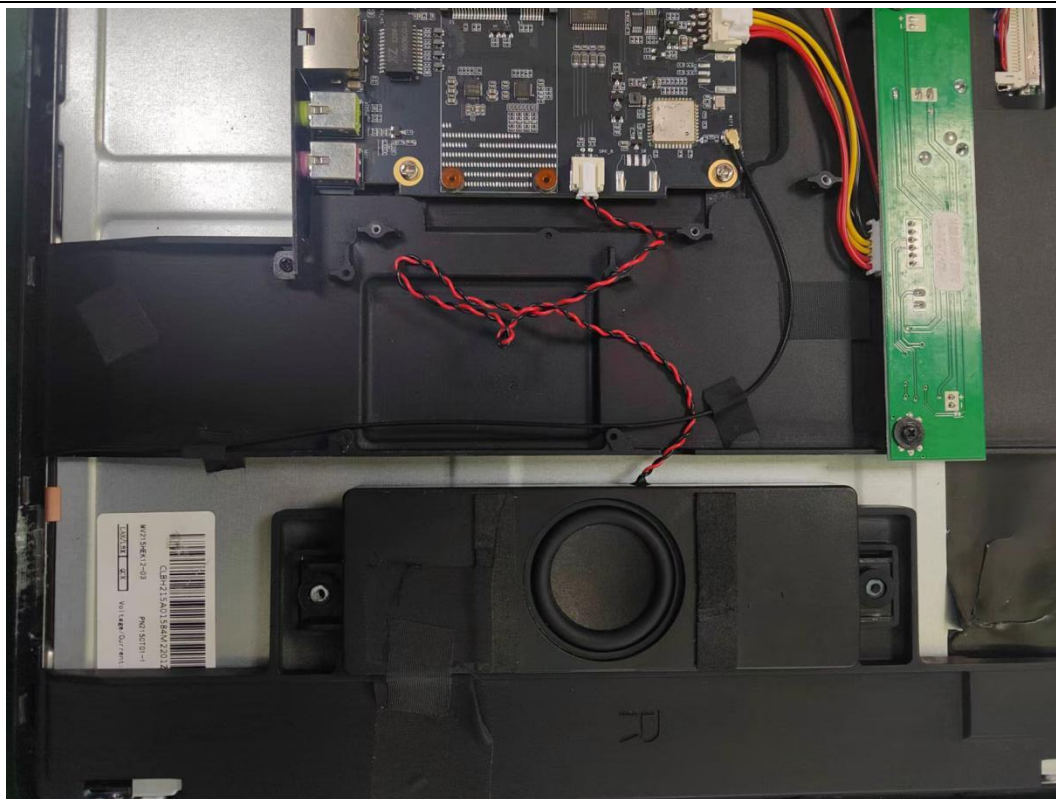
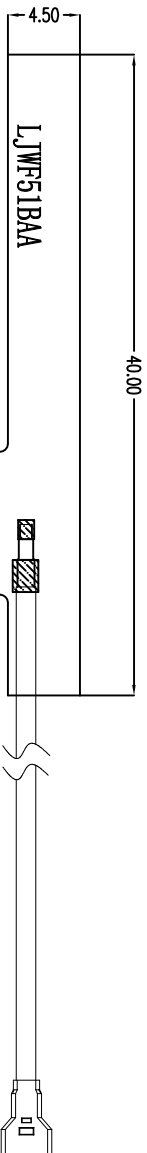
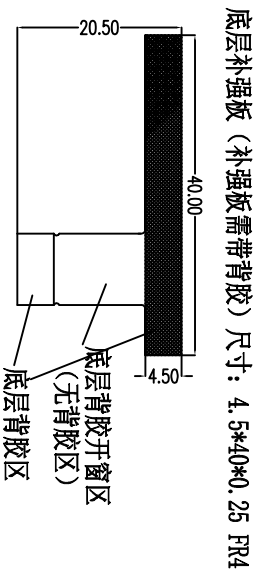
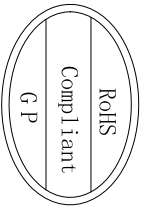


Chart 3 NW2196 assemble type(overall,wifi1)

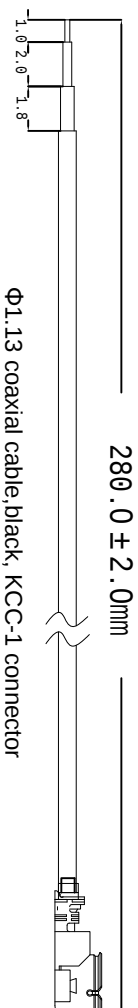
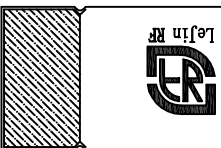


Chart 4 NW2196 assemble type(wifi1)

8.Product Drawing



Connector direction: DOWN



Remark:

- 1.FPC material:Electrolytic copper, PCB: FR4.
- 2.Backing in behind:3M300LSE.
- 3.Tolerance: Cutting die:±0.1mm;Circuit on FPC:±0.05mm; others are ±0.05mm.
- 4.ROHS:(Pb,Hg,Cr+6,PBBS,PBDEs)<1000ppm; Cd,<100ppm.



SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

1									
Revise	2								
record	3								

Third Angle	Project	ELC	Date	2022-06-18
0~10 ±0.05	Part Name	WIFI ANT	Designed by	
10~18 ±0.10	Part No.	NW2193/2198	Checked by	
18~30 ±0.12	Material		RF	
30~40 ±0.15			Approved by	
40~ ±0.20	Treatment	LJF02-22062308-R0A	Unit	
Angle ±0.5°			mm	
Location			Scale	
			FIT	
			Rev	
			A	

Rev	Description	Date	Remark
1	New drawing		

1	2	3	4	5	6	7	8
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